



## Culture and Insurance Sector: Evidence from BIMS TEC and SAARC

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### Abstract

Progress of insurance sector of a nation is influenced by economical, religious, institutional and cultural elements. Culture is the set of some instinct norms of human mind that differentiate one person from the other. This study tries to establish a relationship between the cultural dimensions and the development of insurance sector of BIMS TEC (The Bay of Bengal Initiative for Multi-Sectorial Technical and Economic Cooperation) and SAARC (South Asian Association for Regional Cooperation) countries and also examine the appropriate cultural dimensions for the development of insurance sector of these regions. Five years data (2010-2014) are collected from the website of insurance sector and Hofstede that is converted into simple average for the analysis. Hence, Pearson correlation coefficient is applied and it is observed that long term orientation dimension is statistically significant. This study also reveals that long term orientation and masculinity dimensions of cultural dimensions are appropriate for the development of insurance sector in BIMS TEC and SAARC countries.

**Keywords:** Insurance Sector Development, Cultural Dimensions BIMS TEC, SAARC, Pearson Correlation Coefficient

**JEL Classification:** G22, Z10

**Paper Classification:** Research Paper

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### Introduction

At present various countries of the world constitute agreements and form association for developing trade, education, technology through the mobilization of resources among member countries. SAARC, NAFTA, CEE, SITA, EU, BIMS TEC are the example of these types of associations. BIMS TEC consists of seven countries namely Bhutan, Nepal, Bangladesh, India, Myanmar, Sri Lanka and Thailand. Similarly, Afghanistan, Bhutan, Bangladesh, India, Nepal, Sri Lanka, Maldives and Pakistan are the member countries of SAARC.

Economic development of any country depends on the growth of agriculture, banking and insurance Adams et al. (2005). Insurance sector acts as an important pillar for economic growth of the country (Vadlamannati, 2008; Peter & Kjeli, 2006; Cristea 2014; Curak et.al, 2009 and Horng, 2011) and its development measures through various tools. Total premium is one of these (Haiss & Sumegi, 2006; Victor, 2013). It may be life or non-life premium (Oko & Ojo, 2012). Ilhan EGE &



Taha Bahadır SARAC (2011) used total saving of insurance company as their growth measurement criteria. Development of this sector depends on total population of the country which is positively significant with each other (Mantis & Farmer, 1968). It is used for calculation of insurance density that can be treated as important tool for measuring the development of insurance sector (Ward et al., 2002). As well as, sector efficiency is disclosed by this density ratio. Similarly, another important growth measurement yardstick of this sector is insurance penetration (Zhou, 2003). It is the total insurance consumption in respect of country's Gross Domestic Product (GDP) which represents potentiality of this sector. These two standards (i.e. density and penetration) depend on various factors. Truett & Truett (1990) reveal that in Mexico, the age, education and income of individual positively influence the insurance penetration. Government expenditure, dependency ratio, individual's income have an impact on insurance penetration (Browne & Kim, 1993; Burnett & Palmer 1984) opined that this sector is affected by various psychological and demographical factors. Psychology is the science of the human mind and behavior (Nordqvist et al., 2015). Human mind is the set of few programming that is called culture which helps to extricate one man from another (Hofstede et al., 2005). It is the composite form of six dimensions (Hofstede, 1993) that influence the economic development of any country (Fellner, 2008). As insurance sector is an emerging part of economy, this is influenced by the cultural dimensions.

Insurance density and penetration is generally used as yardstick for measuring the development of insurance sector. It can be said that, these two are also affected by the dimensions which are provided by Greet Hofstede.

## Literature Review

Economic growth of a country significantly depends on insurance sector development (Peter & Kjeli, 2006; Cristea et al. 2014; Curak & Loncar, 2012 and Horng et al. 2011). Development of this sector depends on different elements. Zhuo (1998) conducted a study considering time series data and investigated consumer price indexes and GDP per capita significantly influence the development of insurance consumption. Income and interest rate are positively associated with insurance demand was identified by Beenstock et al. (1998). Hammond et al. (1967) conducted a study that examined and revealed the positive effect of education, occupation, net worth holding, income, stages in the life cycle on life insurance development. Inflation rate of a country has an effect on life insurance demand. Similarly, this is also influenced by birth of urban household, number of marriage (Neumann, 1969). Berekson (1972) examined the impact of various social problems like gross income, age, birth order among siblings, parent divorce rate and number of children on insurance consumption. A study conducted by Fortune (1973) revealed significant positive impact of wages, discount rate, consumer confidence on life insurance demand and negative impact of non human wealth on that. It is also influenced by young newly married couples (Anderson & Nevin, 1975). They observed that it is also significantly influenced by education, current household income, expected household income, insurance of husband before marriage, insurance of wife before marriage and net worth of household. Psychological and demographical effects on insurance consumption are reflected in the study of Burnett & Palmer (1984). Their study examined the psychographic elements like work fatalism, assertiveness, religion salience and social preference are important determinants which influence the consumption of life insurance. Hwang & Greenford (2005) observed positive impact of income, economic development and education on life insurance demand but the policy of one child and social structure had negative impact on it. A study conducted by Li et al. (2007) examined the impact of determinants on the consumption of insurance (life) by applying cross section data series of 30 OECD (Organisation for Economic Co-operation and Development) countries during

the duration 1993-2000. Result revealed that number of dependents, income, level of education and competition's degree are positively related with life insurance demand. But expenditure for social security, rate of real interest, life expectancy rate and inflation rate decreased the consumption of life insurance of these countries. Zietz (2003) conducted a study which examined that the impact of education and income on consumer's life insurance demand in China. Brown et al. (2000) examined that the income and legal systems had positive impact on life insurance demand of OECD over the duration of 1986-1993. Beck & Webb (2002) found out the positive relationship of insurance (life) penetration with GDP, inflation volatility, real interest rate, percentage of private savings.

National culture of any country is related with life insurance development. Chui et al. (2008) conducted a study on Hofstede's cultural dimensions and life insurance development. They investigated that individualism and masculinity/femininity have significant positive and negative relationship with life insurance development respectively. Chui & Kwok (2009) conducted a study on thirty eight countries by using data from 1966 to 2004. Their studies disclosed that, a powerful relationship between life insurance demands, collectivism and power distance. In other study, Park & Lemaire (2013) argued that non life insurance has relationship with Hofstede's dimensions of culture.

Development of insurance sector relates with various determinants like income, interest rate, education, occupation, marriage, divorce rate, urban household, non human wealth, social preference, religion, dependency ratio, private saving as well as national culture. Results of these studies are calculated by analyzing the relevant data of various countries for separate periods. But there are no such studies which try to find out the association between cultural dimensions and insurance sector development as well as appropriate cultural dimensions for the development of insurance sector among BIMS TEC and SAARC countries. These are the research gaps which motivated for this work.

## Objectives of the study

This study is designed to achieve the following objectives:

- i. Establish the association between Hofstede national culture dimensions and the insurance sector development of BIMS TEC and SAARC countries.
- ii. Second objective is to find out appropriate cultural dimensions for the development of insurance sector among BIMS TEC and SAARC countries.

## Hypotheses based on Six Cultural Dimensions

This section presents logical establishment of six hypotheses on the basis of six cultural dimensions.

**Power Distance (PD):** Degree of inequality among people of a nation is measured by Power Distance. People belonging to High Power Distance accept inequalities in power, wealth. High degree of autocratic leadership is tolerated by them (Hofstede,1993). Power distance has negative impact on life insurance demand (Chui & Kwok, 2008). Treerattanapun (2011) reveals that low degree of power distance entertains high level of non-life insurance consumption. So it can be said that power distance is negatively related with insurance sector. Under this situation, following hypothesis may be drawn.

H<sub>1</sub> (Hypothesis No: 1): Negative relationship exists between power distance and development of insurance sector of BIMS TEC and SAARC countries.

**Individualism (IDV):** It represents the gradation that people of a nation are interested to do their activities as individuals than as group member (Hofstede, 1993). High level of individualism positively influences the life insurance consumption (Chui & Kwok, 2008). So logically it can be established that people of more individualistic nation are interested to buy large number of insurance products due to their loneliness or less dependency on family. This condition helps to draw the following hypothesis.

H<sub>2</sub>: There is a positive association between individualism and insurance sector development of BIMS TEC & SAARC countries.

**Masculinity (MAS):** It represents the various activities of females and males that reflect within the society. A society where masculinity exists, achieving, executing, earning and living are given importance. Whereas the societies of feminine dimension present a few qualities like helping each other and environment of creating a cordial relationship, and improving the quality of life (Hofstede, 1993). In case of consumption of life insurance, Chui & Kwok (2008) identify that feminine society is interested to consume more amount insurance (life) product, because their society is very careful to the needs of their family members and want to prevent the ramification of an immature death. Other side masculine society may purchase more insurance for accurately controlling the future. This circumstance clears that masculinity and insurance sector development has positive relationship. Hypothesis for this type of relation can be drawn as follows.

H<sub>3</sub>: There exists a positive association between masculinity and the development of insurance sector of BIMS TEC & SAARC countries.

**Uncertainty Avoidance (UA):** This dimension deals with gradation that represents the individual of a society feels uncertainty. People of high uncertainty avoidance country are more nervous than lower uncertainty avoidance country (Hofstede, 1993). They are willing to pay more insurance premium for reducing their risk (Park & Lemaire, 2005). It has high level positive impact on insurance consumption (Treerattanapun, 2011). On the basis of this logic, following hypothesis can be presented.

H<sub>4</sub>: Uncertainty Avoidance is positively associated with the development of insurance sector of BIMS TEC and SAARC countries.

**Long Term Orientation (LTO):** People of society want to retain a link accompanying their own prior activities; however they cope up with the present or future confrontation. High score of this dimension indicates nations belong to pragmatic approach. People of this nation encourage themselves and give emphasis on modern education (Hofstede, 1993). Lemaire (2011) argues on the basis of his research that this long-term orientation has a powerful positive association with the consumption of life insurance. Under this condition, it may be expected that long term orientation has positive association with the development of insurance sector. So hypothesis may be presented as follows.

H<sub>5</sub>: There is a positive relationship of long term orientation with insurance sector development of BIMS TEC and SAARC countries.

**Indulgence:** Indulgence dimension represents a nation where free gratification is allowed for enjoying life and fun (Hofstede, 1993). So it can be expected that high score oriented nation under this dimension is not able to think reality of future due to free gratification. Naturally they will not be interested about future savings as well as consumption of insurance. Hence it can be concluded that indulgence has negative relation with insurance sector development. Hypothesis about this dimension may be as follows.

H<sub>6</sub>: Indulgence and development of Insurance sector of BIMS TEC and SAARC countries is negatively associated.

**Methodology and Data Collection**

Data for this study are collected from two fold segments i.e. cultural dimension related data are collected from Greet Hofstede’s website and insurance related data are collected from Swiss Re Sigma’s website. Seven BIMS TEC and six SAARC (Excluded Afghanistan and Maldives due to non availability of data) countries are considered.

Insurance density and penetration are used for measuring the development of insurance sector. Simple average value of insurance density and penetration are calculated by using five years relevant data (2010 to 2014) for every BIMS TEC and SAARC countries. Simple average score of six dimensions are also calculated for BIMS TEC and SAARC countries. Simple Average is calculated by using the formula  $(\sum_{i=1}^n Xi/N)$  where Xi represents insurance density penetration and score of cultural dimensions and five years data is represented by i (i varies from 1 to 5). N is the total of insurance density, penetration and culture. Relationship of six cultural dimensions with insurance sector development among BIMS TEC and SAARC countries is calculated by using Pearson Correlation coefficient. Formula has been given below.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Relationship of six cultural dimensions with insurance sector development among BIMS TEC and SAARC countries is calculated by using Pearson Correlation coefficient. Simple line diagram is used for comparative analysis between SAARC and BIMS TEC countries. The above mentioned hypothesis is tested by using t test. All results are computed by using SPSS (Statistical Package for the Social Sciences) 20 version.

**Analysis of Result**

Result of this study is analysed by considering six steps on the basis of six dimensions and lastly a comparative analysis.

**Power Distance**

Pearson correlation coefficient between power distance and insurance sector development represents negative value, which is depicted by the following Table .1

**Table 1  
Power Distance and Insurance Sector Development**

Indicators of Insurance Sector Development	Power Distance	
	BIMS TEC	SAARC
Insurance Density	-0.080	-0.43
Sig.	0.865	0.395
Insurance Penetration	-0.123	-0.648
Sig.	0.793	0.164

Negative relationship of power distance with insurance density and insurance penetration indicates the reverse effect of power distance on insurance sector development. This was also

revealed in case of non-life insurance by Treerattanapun (2011). Hence, power distance of BIMS TEC countries has lower reverse effect than SAARC countries. This cultural dimension is more influential among SAARC countries. Relationships satisfy the hypothesis (H1) but these are not significant at 10 % level.

**Table 2**  
**Individualism and Insurance Sector Development**

Indicators of Insurance Sector Development	Individualism	
	BIMS TEC	SAARC
Insurance Density	0.227	0.280
Sig.	0.625	0.591
Insurance Penetration	0.326	0.358
Sig.	0.476	0.486

Individualism and insurance sector development is positively related to each other. In a study, Mitra (2016) empirically proves that individualistic societies are interested to purchase insurance (life) policy. Hence, Table 2 depicts individualism of SAARC countries is strongly related with development of insurance sector than BIMS TEC countries. These relationships satisfy the hypothesis (H2) but significant levels are very high i.e. 62.5%, 59.1%, 47.6% and 48.6% respectively. These are not significant at 10% level.

**Table 3**  
**Masculinity and Insurance Sector Development**

Indicators of Insurance Sector Development	Masculinity	
	BIMS TEC	SAARC
Insurance Density	0.634	0.81
Sig.	0.126	0.051
Insurance Penetration	0.315	0.508
Sig.	0.492	0.304

Masculinity dimension positively influences the insurance sector development but these relationships are not significant at 10% level. Mitra (2016) reveals that there is no significant relationship between development of insurance sector and masculinity. Hence, results clear that intensity of this relationship of SAARC related countries is greater than BIMS TEC countries.

**Table 4**  
**Uncertainty Avoidance and Insurance Sector Development**

Indicators of Insurance Sector Development	Uncertainty Avoidance	
	BIMS TEC	SAARC
Insurance Density	0.148	0.557
Sig.	0.751	0.251
Insurance Penetration	0.043	0.649
Sig.	0.927	0.163

Development of insurance sector is positively influenced by uncertainty avoidance. Table 4 represents 1% change of uncertainty avoidance influences, 14.81% change of insurance density in BIMS TEC countries and 55.7% change in SAARC countries. Similarly, 1% change in insurance

penetration influences 4.30% change in BIMS TEC countries and 64.9% change in SAARC countries. So effect of uncertainty avoidance in SAARC countries is greater than BIMS TEC countries. These results satisfy the hypothesis (H4) and the significant levels are very high i.e. 75.1%, 25.1%, 92.7% and 16.3% respectively and these are not significant at 10% level.

**Table 5**  
**Long Term Orientation and Insurance Sector Development**

Indicators of Insurance Sector Development	Long Term Orientation	
	BIMS TEC	SAARC
Insurance Density	0.793	0.852
Sig.	0.033*	0.031*
Insurance Penetration	0.858	0.871
Sig.	0.014*	0.024*

Correlation coefficient of long term orientation and insurance sector development satisfy hypothesis (H5) and these are statistically significant at 5% level. Impact of Long term orientation dimensions is higher within SAARC countries than BIMS TEC countries.

**Table 6**  
**Indulgence and Insurance Sector Development**

Indicators of Insurance Sector Development	Indulgence	
	BIMS TEC	SAARC
Insurance Density	-0.551	-0.557
Sig.	0.2	0.251
Insurance Penetration	-0.683	-0.775
Sig.	0.091*	0.07*

Indulgence cultural dimension is negatively related with insurance sector development. Hence all results satisfy hypothesis (H6) but only relationships between indulgence and insurance penetration are significant at 10% level. Negative effect of indulgence on insurance sector development in SAARC related countries is greater than BIMS TEC countries.

## Comparative Analysis

Relationship of six cultural dimensions with insurance density is summarized in Table 7.

**Table 7**  
**Insurance Density and Cultural Dimensions**

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
Insurance Density (BIMS TEC)	-0.080	0.227	0.634	0.148	0.793	-0.551
Insurance Density (SAARC)	-0.43	0.28	0.81	0.557	0.852	-0.557

Table 7 shows that degree of relationship between cultural dimensions and insurance density is higher in SAARC countries than BIMS TEC countries. Following diagram (Figure 1) shows that curve of SAARC countries exist in higher position than the curve of BIMS TEC countries.

**Figure 1**  
**Line of relationship between Cultural Dimensions and Insurance Density**

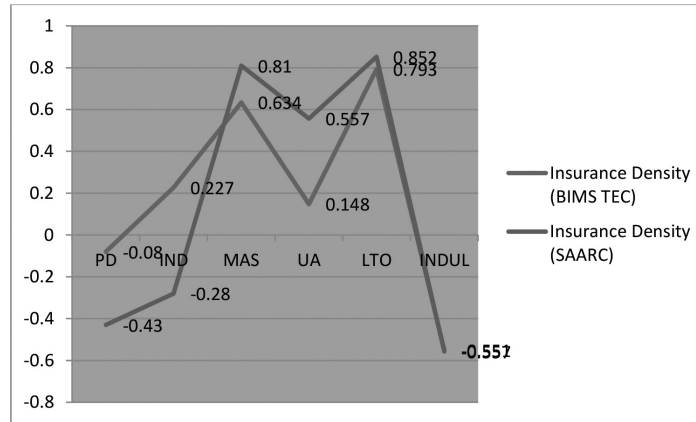


Figure 1 presents that Long Term Orientation (LTO) occupies higher position in terms of relationship with insurance density. It indicates the strength of relationship curve of SAARC exists in higher position than relationship curve of BIMS TEC.

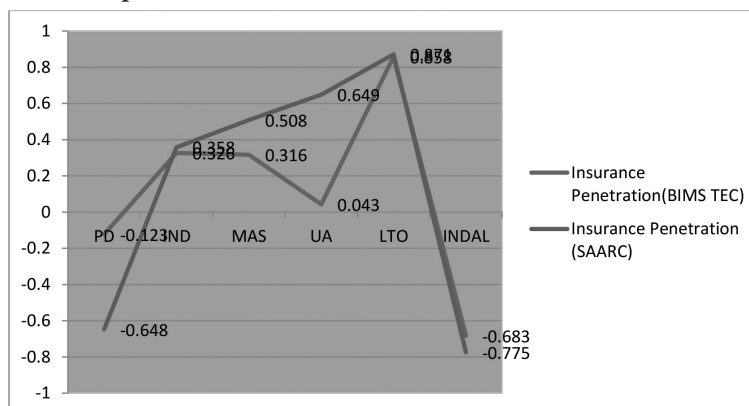
Same way insurance penetration is also related with six cultural dimensions which is reflected by the following Table 8

**Table 8**  
**Insurance Penetration and Cultural Dimensions**

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
Insurance Penetration(BIMS TEC)	-0.123	0.326	0.316	0.043	0.858	-0.683
Insurance Penetration (SAARC)	-0.648	0.358	0.508	0.649	0.871	-0.775

All national cultural dimensions of BIMS TEC and SAARC countries are related with insurance penetration but intensity of relationship of SAARC countries is greater than BIMS TEC countries. Following diagram (Figure 2) shows this result clearly.

**Figure 2**  
**Line of relationship between Cultural Dimensions and Insurance Penetration**



Long Term Orientation related relationship occupies extreme position and intensity of insurance penetration curve of SAARC countries is higher than BIMS TEC countries.

So, insurance sector development and cultural dimensions related relationship exists among sample countries. Among six dimensions, long term orientation is most important dimension for the development of insurance sector within SAARC and BIMS TEC countries during sample period. Second dimension for the insurance sector development is masculinity.

## Conclusion

Cultural dimensions indicate the inner thought, norms and practices of a nation. Hofstede's six national cultural dimensions of SAARC and BIMS TEC countries are related with insurance sector development. Results regarding relationship of all dimensions with insurance density and penetration satisfy alternative hypotheses but only the result related with Long Term Orientation (LTO) dimension is significant at 5% level. It has higher positive impact on the development of insurance sector. Masculinity is another dimension which has second higher positive impact on the insurance sector development. Results also find out that degree of relationship of SAARC countries is higher than BIMS TEC countries.

Hence, Pearson Correlation Coefficient of five years (2010 to 2014) simple average data of insurance density, penetration and simple average data of Hofstede's six cultural dimensions reveals that supportive cultural dimensions for the growth and insurance sector development are long term orientation and masculinity within SAARC and BIMS TEC countries. So, insurance companies should consider those countries where the scores of long term orientation and masculinity are higher than scores of other dimensions for the development of their business. Their business policy should give the importance on these two cultural dimensions. This study will provide better results if more amount of data for large number of years are considered.

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